REMARKS

This is in response to the Office Action mailed 8/11/99 (Paper no. 5). Claims 1, 4, 11, 21, 27, and 28 have been amended above. Claims 30, and 31 have been added. Claims 1-31 are now pending in this application.

In paragraph 1 of the Office Action, the Examiner objected to the Specification because of informalities in Claims 4, and 21. Claims 4 and 21 have been amended above to overcome the Examiner's objections.

In paragraph 2 of the Office Action, the Examiner objected to the Drawings in the instant Application, because according to the Examiner reference numeral 64, referred to on page 8, line 8 of the instant Specification, is not shown in the drawings. The Applicant respectfully disagrees. The Examiner's attention is respectfully directed for example to Figs. 2, 3A, and 3B, (see attached marked-up copies) which show reference numeral 64.

In paragraph 3 of the Office Action, the Examiner rejected Claim 28 under 35 U.S.C. 112, Second paragraph, as being indefinite. Claim 28 has been amended above to overcome the Examiner's rejection.

In paragraph 4 of the Office Action, the Examiner rejected Claims 1-4 and 10 under 35 U.S.C. 102 as being anticipated by Bonora et al.'585 (hereafter Bonora). The Applicant respectfully disagrees.

Claim 1 calls for a substrate load lock comprising a frame forming at least three chambers, and (comprising) a substrate support with two support area disposed on the

support in spaced relation wherein the first support area and the second support area are respectively located in different ones of the three chambers when the support is in the final position.

Bonora does not anticipate Claim 1. In Figs. 4-4A, Bonora discloses a load lock chamber 20 with a standardized mechanical interface (SMIF) pod 22 located thereon. In col. 6, lines 34-36, Bonora discloses that load lock chamber 20 includes a purging chamber 28 and an operating chamber 30. The SMIF pod 22 is removably mounted on top of the load lock chamber 20. Hence, the load lock chamber 20 in Bonora has merely two chambers (i.e. purging chamber 28 and operating chamber 30). The SMIF pod 22 in Bonora is not part of the load lock chamber 20. In contrast, Claim 1 calls for a load lock comprising a frame forming at least three chambers (not two chambers). Bonora, however, discloses that the load lock chamber 20 has but two chambers and a removable SMIF pod 22 which is merely placed on top of the load lock frame. Clearly, the SMIF pod 22 is not part of the load lock chamber frame in Bonora. The load lock chamber 22 in Bonora has merely two chambers and not three chambers as called for in Claim 1.

Moreover, even if, for the purpose of argument, the load lock chamber 20 in Bonora is construed to have three chambers (though the Applicant maintains that the load lock chamber in Bonora has only two chambers 28,30), Bonora does not disclose a substrate support with two support areas disposed in spaced relation wherein the support areas are respectively located in different chambers of the load lock when the support is moved to a final position. Rather, in Figs. 4 and 5A-9, Bonora discloses that load lock chamber 20 includes merely a single indexing platform 32 supported by a

telescopic shaft 45 which moves the single platform 32 between chamber 28 and chamber 30 (col. 8, lines 55-56). The single platform 32 supports a single wafer cassette. By comparison, Claim 1 calls for a substrate support with two support areas (not a single platform) disposed in spaced relation. Bonora, on the other hand, discloses merely a single platform 32. Furthermore, Claim 1 recites that the first support area and the second support area of the substrate support are respectively located in different chambers of the load lock when the support is moved to a final position. The single platform 32 in Bonora, however, clearly can be located in only one chamber, and all substrates on the platform 32 are located in the same chamber when the platform is in a final position. Bonora simply does not disclose two support areas of the substrate support located respectively in different chambers as called for in Claim 1. Claims 1-10 read over of the cited prior art and should be allowed.

In paragraph 6 of the Office Action, the Examiner rejected Claims 1-5, 8-11, 21-23, 25-27, and 29 under 35 U.S.C. 102 as being anticipated by Blum et al. (hereafter Blum).

As noted previously, Claim 1 calls for a substrate support having two support areas, the two support areas being disposed on the substrate support in spaced relation wherein the first support area and the second support area are respectively located in different ones of the three chambers when the support is in the final position.

Blum does not anticipate Claim 1. In Fig. 12, Blum discloses load lock chamber 112 with two movable compartments 242,244 which can be moved up and down into a transfer region 246 of the load lock chamber 112. As seen in Fig. 12, load lock chamber 112 has two elevator shafts

224. In col. 7, lines 10-11, Blum discloses that each compartment 242,244 is connected to a corresponding elevator shaft 224 which moves the respective compartment within the load lock chamber 112 (see also Fig. 12). Hence, in Blum, each elevator shaft has one compartment 242,244. This is different than the features recited in Claim 1. Claim 1 calls for two support areas being disposed on one substrate support. The compartments 242,244 of the load lock 112 in Blum, however, are not disposed or connected to one support or elevator shaft. Rather, each compartment 242,244 of the Blum load lock is connected to a separate elevator shaft 224. Moreover, when either elevator shaft 224 in Blum is in a final position the compartment 242,244 connected to the respective shaft 224 is located either in the transfer region 246 or out of the transfer region of the load lock chamber 112. Blum simply does not disclose that two support areas of the substrate support are respectively located in different ones of the three chambers of the load lock frame as otherwise called for in Claim 1. Claims 1-10 read over the cited prior art and should be allowed.

Claim 11 now calls for the two substrate supports being connected to each other wherein movement of one substrate support effects movement of the other substrate support.

Blum clearly does not anticipate Claim 11. As stated previously with respect to Claim 1, in Fig. 12, Blum discloses a load lock chamber 112 with two compartments 242,244 capable of moving within the chamber. In col. 7, line 10, Blum discloses that each compartment 242,244 is connected to a separate elevator shaft 224 (see Fig. 12). Each shaft is independently powered by separate motor. In col. 7, lines 39-40, Blum discloses that each compartment 242,244 moves independently within the load lock 112. This

is clearly different that than the features called for in Claim 11. Claim 11 calls for two substrate supports being connected to each other wherein movement of one substrate effects movement of the other substrate support. Blum, on the other hand, discloses that the compartments move independently. Claim 11 clearly reads over Blum. Accordingly, Claims 11-20 are patentable over the cited prior art and should be allowed.

Claim 21 calls for a moving support attached to the frame (of the load lock) having an upper substrate support area and a lower substrate support area, wherein the moving support reciprocates for alternately moving the upper support area and the lower support area into the chamber.

Blum does not anticipate Claim 21. As stated previously with respect to Claims 1, and 11, in Fig. 12, Blum discloses a load lock chamber 112 with two moveable compartments 242,244. Each compartment 242,244 is attached to a corresponding elevator shaft 224 (col. 7, line 10). Each shaft 224 of each compartment is powered by a separate motor (col. 7, line 39). Each compartment in Blum moves independently from the other. Further, in col. 7, lines 1-2, Blum discloses that each compartment 242,244 has only one support platform 248 for supporting wafer cassettes in the corresponding chamber. This is different than Claim 21. Claim 21 calls for a moving support attached to the frame having an upper substrate support area and a lower substrate support area. Hence, Claim 21 calls for the moving support to have two support areas. Blum on the other hand, discloses two independently movable compartments, each independent compartment having but one support platform 248. Blum does not disclose one moving support having an upper

substrate support area and a lower substrate support area (i.e. one support with two substrate support areas).

Moreover, as noted above, each compartment 242,244, in Blum moves independently from the other. Hence, compartment 242 moves up and down independent of compartment 244. Conversely, compartment 244 moves up and down independent of compartment 242. In Blum, moving compartment 242 up and down moves only compartment 242 in and out of the transfer region 246 of the load lock 112. Conversely, moving compartment 244 up and down moves only compartment 244 in and out of the transfer region 246 of the load lock. Clearly, moving compartment 242 up and down does not move both compartment 244 and compartment 242 alternately into and out of the transfer region 246, and moving compartment 244 up and down does not move both compartment 242 and compartment 244 alternately into and out of the transfer region 246. By comparison, Claim 21 recites that the moving support reciprocates for alternately moving the upper support area and the lower support area into the chamber of the load lock. This is clearly different than the disclosure in Blum. In Blum, compartments 242,244 move independently, and movement of one compartment 242,244 does not move the other compartment alternately or otherwise. Claims 21-25 read over the cited prior art and should be allowed.

Claim 26 recites that moving the first substrate support area (of the load lock) effects movement of a second substrate support area of the load lock.

Blum does not anticipate Claim 26. As noted before, the movable compartments 242,244, in Blum, each are connected to independent elevator shafts 224. Each compartment 242,244, in Blum moves independently of the other (col. 7, lines 39-

40). By comparison, Claim 26 recites that moving the first substrate support effects movement of the second substrate support of the load lock. In Blum, however, each compartment moves independently, (i.e. movement of either one of the compartments 242,244 does not effect movement of the other compartment). Claim 26 clearly reads over Blum. Claims 26-29 are patentable over the cited prior art and should be allowed.

Claims 30 and 31 have been added above. Claim 30 includes subject matter recited in Claim 7 and should be allowed in view of the Examiner's indication that Claim 7 contains allowable subject matter. Claim 31 includes subject matter recited in Claim 12 and should be allowed in view of the Examiner's indication that Claim 12 contains allowable subject matter.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present are clearly novel and patentable over the prior art of record. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issue remain, the Examiner is invited to call Applicant's Attorney at the telephone number indicated below.

Enclosed is a check in the amount of $156.00 as payment for the fee for adding two independent claims. Please charge

any fee deficiency resulting from the filing of this amendment to Deposit Account No. **16-1350.**

Respectfully submitted,

J. M

11/12/99

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